CLAIMS

We claim:

1. A skin incision device comprising:

a casing having a slot formed at a bottom surface thereof;

a cover positioned on said casing, said cover being slidable in a direction transverse to a plane of said bottom surface of said casing;

a blade pivotally positioned within said casing generally adjacent said slot, said blade having a pre-actuated position and a post-actuated position;

an actuator means anchored to said casing, said actuator means being actuatable by slidable movement of said cover toward said bottom surface, said actuator means for converting transverse movement of said cover into horizontal movement of said actuator means, said actuator means engaging said blade at said pre-actuated position through said post-actuated position such that at least a portion of said blade extends outwardly of said slot during the movement between said pre-actuated position and said post-actuated position; and

a carriage means anchored to said casing and pivotally attached to said blade, said carriage means for guiding movement of said blade from said pre-actuated position through said post-actuated position.

2. The skin incision device of Claim 1, said casing having a generally open end opposite said bottom surface, said casing having sides extending upwardly from said bottom surface.

3. The skin incision device of Claim 2, at least of one said sides of said casing having a barb extending outwardly therefrom, said cover having a wall extending over a portion of the side of said casing, said wall having a first retaining slot formed therein and a second retaining slot formed therein above said first retaining slot, said barb engaging said first retaining slot when said blade is in said pre-actuated position, said barb engaging said second retaining slot when said blade is in post-actuated position.

4. The skin incision device of Claim 1, wherein said casing is comprised of a release seat, a guide member, and a capture seat all made integral with an inner surface of said casing, said release seat retaining said actuator means when said blade is in said pre-actuated position, said guide member having a bottom edge slidably contacting said carriage means when said blade moves from said pre-actuated position to said post-actuated position, said capture seat receiving said actuator means at said post-actuated position.

5. The skin incision device of Claim 1, wherein said casing comprises:

a first panel; and

a second panel fixedly connected to said first panel, said first and second panels defining said slot.

6. The skin incision device of Claim 1, said blade comprising:

a razor member having a cutting edge;

a retaining hole positioned adjacent an end of said blade, said carriage means being cooperatively connected to said retaining hole so as to pivotally move said razor member between the pre-actuated position and the post-actuated position; and

an elongated hole positioned adjacent an opposite end of said blade, said elongated hole being rotatably interconnected to said casing.

7. The skin incision device of Claim 6, said casing having a blade retainer peg formed therein adjacent said slot of said casing, said elongated hole of said blade positioned on said blade retainer peg.

8. The skin incision device of Claim 1, wherein said blade has a first pivot point connected to said casing and a second pivot point attached to said carriage means, said first pivot point being in rotatable with respect to and in cam relation to said casing during movement of said blade from said pre-actuated position to said post-actuated position.

9. The device of Claim 8, said first pivot point of said blade being an obround formed therein, said obround positioned over a blade retainer peg of said casing.

10. The skin incision device of Claim 1, wherein said actuator means comprises:

a top edge in abutment with said inner surface during movement of said blade from said pre-actuated position to said post-actuated position;

a resilient curved member extending downwardly from said top edge; and

a knuckle positioned on a terminal end of said curved member, said knuckle being fixed by said casing when said blade is in said pre-actuated position, said knuckle engaging said blade during movement of said blade from said pre-actuated position to said post-actuated position.

11. The skin incision device of Claim 10, wherein said casing retains said knuckle in said post-actuated position.

12. The skin incision device of Claim 10, wherein said casing is further comprised of a knuckle travel pocket made integral with an inner surface of said casing.

13. The skin incision device of Claim 1, wherein said casing is comprised of a support member made integral with an inner surface of said casing and positioned adjacent a top surface of said casing, said support member in slidable contact with said actuator means within said casing during said transverse movement of said cover.

14. The skin incision device of Claim 1, wherein said carriage means comprises:

an anchored end connected to said casing;

an arcuate member extending from said anchored end; and

a cam means positioned on a terminal end of said arcuate member and pivotally attached to said blade, said cam means for guiding outward movement of said blade through said slot and for causing a horizontal movement of said blade after said outward movement and for guiding an inward movement through said slot.

15. The skin incision device of Claim 14, wherein said cam means has a curved shape rotatable around a pivot point attached to said blade.

16. A skin incision device comprising:

a casing having a slot formed at a bottom surface thereof;

a cover positioned on said casing, said cover being slidable in a direction transverse to a plane of said bottom surface of said casing;

a blade pivotally positioned within said casing generally adjacent said slot, said blade having a pre-actuated position and a post-actuated position;

an actuator having an end cooperative with an inner surface of said cover and extending downwardly into said casing; and

a carriage means positioned within said casing and pivotally attached to said blade, said actuator cooperative with said blade from said pre-actuated position to said post-actuated position, said carriage means moveable within said casing for guiding said blade between said pre-actuated position and said post-actuated position.

17. The skin incision device of Claim 16, said carriage element means comprising:

an arcuate member with an anchored end rotatably fastened to said casing; and

a cam surface formed on a terminal end of said arcuate member and pivotally attached to said blade, said cam surface cooperative with said casing during an outward movement of said blade through said slot from said pre-actuated position and during a horizontal movement of said blade after said outward movement and during an inward movement through said slot to said post-actuated position.

18. The skin incision device of Claim 16, said actuator is comprised of a resilient member having a knuckle formed at an end of said resilient member, said knuckle cooperative with said blade from said pre-actuated position to said post-actuated position.

19. The device of Claim 16, said casing having a blade retainer peg formed therein, said blade comprising:

a razor member having a cutting edge;

a retaining hole positioned adjacent an end of said blade, said carriage means being cooperatively connected to said retaining hole so as to pivotally move said razor member between the pre-actuated position and the post-actuated position; and

an elongated hole positioned adjacent an opposite end of said blade, said elongated hole being rotatably mounted on said blade retainer peg of said casing.

20. A skin incision device comprising:

a casing having a slot formed at a bottom surface thereof;

a cover positioned on said casing, said cover being slidable in a direction transverse to a plane of said bottom surface of said casing, said casing having a generally open end opposite said bottom surface thereof, said casing having sides extending upwardly from said bottom surface, at least of one said sides of said casing having a barb extending outwardly therefrom, said cover having a wall extending over a portion of the side of said casing, said wall having a first retaining slot formed therein and a second retaining slot formed therein above said first retaining slot;

a blade pivotally positioned within said casing generally adjacent said bottom of said casing, said blade having a pre-actuated position and a post-actuated position, said barb engaging said first retaining slot when said blade is in said pre-actuated position, said barb engaging said second retaining slot when said blade is in post-actuated position;

an actuator means positioned in said casing and actuatable by slidable movement of said cover toward said bottom surface, said actuator means for converting transverse movement of said cover into horizontal movement of said actuator means, said actuator means engaging said blade at said pre-actuated position through said post-actuated position such that at least a portion of said blade extends outwardly of said slot during the movement between said pre-actuated position and said post-actuated position; and

a carriage means anchored to said casing and pivotally attached to said blade, said carriage means for guiding movement of said blade from said pre-actuated position through said post-actuated position.